

### **REMARKS**

The undersigned wishes to thank the Examiner for his time spent conducting the interview on September 16, 2004.

Claims 15, 30, and 38 have been amended. Claims 39-53 have been added. Support for the new claims can be found, among other places, on page 9 of the provisional patent application no. 60/161,246 filed October 25, 1999. Therefore, each of the new claims enjoys the priority date of this provisional application. With entry of this Amendment, claims 15, 30, 36-53 will be pending.

Claims 15-16 and 22-38 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,342,836 issued to Harvey ("Harvey").

Claim 15 recites a method for the anaerobic digestion of high-solids waste, the method comprising:

providing a closed container including

a first passage in which the waste material flows in a first direction, the first passage having first and second ends, the first end including an inlet for waste material, and

a second passage in which the waste material flows in a second direction opposite the first direction, the second passage having first and second ends, the second end including an outlet, the first passage being separated from the second passage by a divider, the second end of the first passage being adjacent the first end of the second passage, and the first end of the first passage being adjacent the second end of the second passage; and

using a heating device positioned in the first or second passage to induce the high-solids waste to move in a corkscrew-like fashion through at least one of the first passage and the second passage.

As the Examiner and undersigned discussed and agreed upon during the interview, Harvey does not teach or suggest, among other things, using a heating device positioned in the first or second passage to induce the high-solids waste to move in a corkscrew-like fashion through at least one of the first passage and the second passage. Harvey, in contrast, uses mechanical augers to move biomass slurry through its digester unit. The Examiner directs the Applicant's attention to col. 4, lines 24-30; col. 4, lines 64 through col. 5, line 24; and col. 6,

lines 9-12, which, in part, disclose that “fluid such as steam or water under pressure may be introduced into the digester through a conventional rotary seal.” Col. 4, lines 64-67. As discussed during the interview, however, nowhere in Harvey is a heating device positioned in the first or second passage taught or suggested.

Consequently, claim 15 is allowable. Reconsideration and allowance of claim 15 are respectfully requested.

Claim 39 depends from allowable independent claim 15, and therefore is allowable. Claim 39 also contains additional patentable subject matter. Particularly, claim 39 specifies the method of claim 15, wherein the first passage and the second passage are separated by a center wall, the container has outside walls, and the center wall and outside walls are substantially planar and vertical. Accordingly, claim 39 is further allowable.

Claim 40 depends from allowable claim 39, which depends from allowable independent claim 15, and therefore is allowable. Claim 40 also contains additional patentable subject matter. Particularly, claim 40 specifies the method of claim 39, wherein the heating device is positioned adjacent the center wall, and the heating device provides convective forces that cause heated sludge to rise near the center wall, while sludge near the relatively cooler outer wall falls under convective forces. Accordingly, claim 40 is further allowable.

Claim 41 depends from allowable claim 39, which depends from allowable independent claim 15, and therefore is allowable. Claim 41 also contains additional patentable subject matter. Particularly, claim 41 specifies the method of claim 39, wherein the heating device is positioned adjacent one of the outside wall, and the heating device provides convective forces that cause heated sludge to rise over the outside wall, while sludge near the relatively cooler center wall falls under convective forces. Accordingly, claim 41 is further allowable.

Claims 36-49 depend from allowable independent claim 15, and therefore are allowable. Claims 36-49 may contain additional patentable subject matter that may or may not be discussed within this response. Accordingly, allowance of claims 36-49 is respectfully requested.

Claim 30 recites a method for the anaerobic digestion of high-solids waste, the method comprising:

- positioning a liquid diffuser or gas diffuser in an anaerobic digestion container; and
- using the diffuser to move the high-solids waste in a corkscrew-like flow path through at least a portion of the container.

As the Examiner and undersigned discussed and agreed upon during the interview, Harvey does not teach or suggest, among other things, a liquid or gas diffuser positioned in an anaerobic digestion container, and using the diffuser to move the high-solids waste in a corkscrew-like flow path through at least a portion of the container. As discussed above, the Examiner directs the Applicant's attention to col. 4, lines 24-30; col. 4, lines 64 through col. 5, line 24; and col. 6, lines 9-12, which, in part, disclose that "fluid such as steam or water under pressure may be introduced into the digester through a conventional rotary seal." But nowhere in Harvey is a diffuser positioned in the container taught or suggested. In fact, Harvey's auger configuration does permit such a diffuser to be placed within the container.

Consequently, claim 30 is allowable. Reconsideration and allowance of claim 30 are respectfully requested.

Claim 51 depends from allowable independent claim 30, and therefore is allowable. Claim 51 also contains additional patentable subject matter. Particularly, claim 51 specifies the method of claim 30, wherein the first passage and the second passage are separated by a center wall, the container has outside walls, and the center wall and outside walls are substantially planar and vertical. Accordingly, claim 51 is further allowable.

Claim 52 depends from allowable claim 51, which depends from allowable independent claim 30, and therefore is allowable. Claim 52 also contains additional patentable subject matter. Particularly, claim 52 specifies the method of claim 51, wherein the diffuser is positioned adjacent the center wall, and the diffuser provides forces that cause sludge to rise near the center wall, while sludge near the outer wall falls. Accordingly, claim 52 is further allowable.

Claim 53 depends from allowable claim 51, which depends from allowable independent claim 30, and therefore is allowable. Claim 53 also contains additional patentable subject matter. Particularly, claim 53 specifies the method of claim 51, wherein the diffuser is positioned adjacent one of the outside walls and the diffuser provides forces that cause sludge to rise near the outer wall, while sludge near the center wall falls. Accordingly, claim 53 is further allowable.

Claims 50-53 depend from allowable independent claim 30, and therefore are allowable. Claims 50-53 may contain additional patentable subject matter that may or may not be discussed within this response. Accordingly, allowance of claims 50-53 is respectfully requested.

Entry of the amendment and examination on the merits are respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'G. J. Hartwig', with a large, stylized flourish at the end.

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